

Sub  
Cl1

1. A method of simultaneously removing multiple  
2 hair follicles from a skin region of a patient, said method  
3 comprising illuminating the hair follicles with a large-area  
4 optical radiation field delivered by a transparent contact  
5 device positioned proximal to the skin region, wherein said  
6 illuminating heats the hair follicles so that they are  
7 removed while leaving the skin region substantially free of  
8 injury.

1 2. The method of claim 1, wherein during said  
3 illuminating the contact device is in direct contact with  
the skin region.

Sub  
Cl2

1 2. The method of claim 2, wherein a substance is  
3 applied to the skin region prior to illuminating the region.

1 2 3. The method of claim 2, wherein the contact  
device, when in contact with the skin, is cooled to a  
temperature below that of the skin in order to increase the  
4 damage threshold of the skin region.

1 2 3. The method of claim 1, wherein during said  
illumination the contact device focusses the optical  
radiation onto the skin region.

1 2 3. The method of claim 5, wherein during said  
illumination the contact device focusses the optical  
radiation below the papillae of the hair follicles.

1 2. The method of claim 1, wherein the optical  
radiation is pulsed.

1        8. The method of claim ~~7~~, wherein the optical  
2 radiation has a pulse duration of between 50  $\mu$ s and 200 ms.

C        1        5. <sup>74</sup> The method of claim ~~8~~, wherein the optical  
2 radiation has a pulse duration of between 10 and 30 ms.

C        1        8. <sup>74</sup> The method of claim ~~1~~, wherein the wavelength  
2 of the optical radiation is one which is selectively  
3 absorbed by <sup>the</sup> hair follicles.

C        1        9. <sup>8</sup> The method of claim ~~10~~, wherein the wavelength  
2 is between 680 and 1200 nm.

1        10. <sup>9</sup> The method of claim ~~11~~, wherein the wavelength  
2 is between 800 and 900 nm or between 1000 and 1200 nm.

1        11. <sup>9</sup> The method of claim ~~1~~, wherein the large-area  
2 radiation field has an area of between 0.5 and 1.2  $\text{cm}^2$ .

1        12. <sup>11</sup> The method of claim ~~13~~, wherein the radiation  
2 field has an area of between 0.75 and 1  $\text{cm}^2$ .

1        13. <sup>12</sup> The method of claim ~~7~~, wherein the radiation  
2 pulse has an energy of between 10 and 1000 J/ $\text{cm}^2$ .

1        14. <sup>13</sup> The method of claim ~~15~~, wherein the radiation  
2 pulse has an energy of between 30 and 50 J/ $\text{cm}^2$ .

1           17. A method of simultaneously removing multiple  
2 hair follicles from a skin region of a patient, said method  
3 comprising illuminating the hair follicles with a large-area  
4 field of pulsed optical radiation wherein:  
5                 (a) the field has a pulse duration of between  
6 50  $\mu$ s and 200 ms;  
7                 (b) the wavelength of the radiation is between  
8 680 and 1200 nm;  
9                 (c) the area of the field is between 0.5 and  
10 1.2 cm<sup>2</sup>; and,  
11                 (d) the pulse energy of the field is between 10  
12 and 1000 J/cm<sup>2</sup>.

Sub Bl > 1           18. A hair-removal device for simultaneously  
2 removing multiple hair follicles from a skin region of a  
3 patient, comprising  
4                 means for generating optical radiation; and  
5                 an irradiating unit including a contact device for  
6 receiving and then delivering the radiation to the skin  
7 region of the patient, said contact device comprising a  
8 large-area, optically transparent apparatus having a surface  
9 shaped to simultaneously contact the multiple hair follicles  
10 in the skin region.

Sub C4 > 1           19. The hair-removal device of claim 18, wherein  
2 said surface is either convex, concave, or substantially  
3 flat.

1           20. The hair-removal device of claim 19, wherein  
2 said contact device is configured to focus light onto the  
3 skin region.

16.

21. The hair-removal device of claim 20, wherein  
said contact device <sup>includes</sup> <sub>^</sub> is a lens.

15

17.

22. The hair-removal device of claim 28, wherein  
said optically transparent apparatus comprises material  
selected from the group consisting of sapphire, fused  
quartz, fused silica, polymeric materials, and glass.

14

18.

23. The hair-removal device of claim 22, wherein  
said optically transparent material has a refractive index <sup>Substantially</sup> <sub>^</sub> matched to that of the skin region.

18

20.

24. The hair-removal device of claim 23, wherein  
said material is sapphire.

19

add C5